
BIZTALK SERVER - HOW DOES IT FIT IN WITH HIPAA?

HIPAA transactions come into an organization in Electronic Data Interchange (EDI) format and are processed by the back-end systems of that organization. They are in most cases processed by systems that do not understand this EDI format. There is a need for software that acts as a middleman by intercepting the EDI request, transforming it into something understandable by the business, and forwarding it on to the appropriate back-end system for processing. BizTalk Server performs this task.

BizTalk is a Business-to-Business (B2B) server. It takes a request, transforms it into a format that can be understood by the application that can process the request, and routes the request to that application. This is a generic process that is useful for any application-to-application (A2A) communication and any B2B interaction. HIPAA transactions are simply new data input formats for existing (legacy) applications. BizTalk fulfills a niche role of providing the channel between these new data inputs and the legacy systems.

Health-care providers and payers have, out of business necessity, developed and/or purchased software that handles all of the transactions that HIPAA mandates. HIPAA mandating the format of these transactions has not created new business processes; it has only provided standard ways of requesting these business processes. Therefore, health-care providers and payers need to hook these new standard formats to the legacy applications that have been previously processing these requests using proprietary data input formats.

Microsoft has created a product called the BizTalk Accelerator for HIPAA. This product is a combination of two components. The first is a set of predefined BizTalk objects that were created specifically for HIPAA transactions. The second is consulting services that provide the glue between generic HIPAA transaction processing and the specific processing needs of individual enterprises.

What is BizTalk Server?

BizTalk Server has two main components:

1. A Business Process Management (BPM) tool and
2. A Messaging service.

Basically, the messaging service receives inbound HIPAA requests and connects BizTalk with the applications that are involved in processing these requests. The BPM tool enables the various enterprise applications and personnel to work together to process the request.

Business Process Management tool

Biztalk's BPM tool (which it calls Orchestration services), like other BPM tools, has two parts

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1. A user interface that allows a user to graphically depict business processes and
2. An engine that can execute these business processes in response to an event.

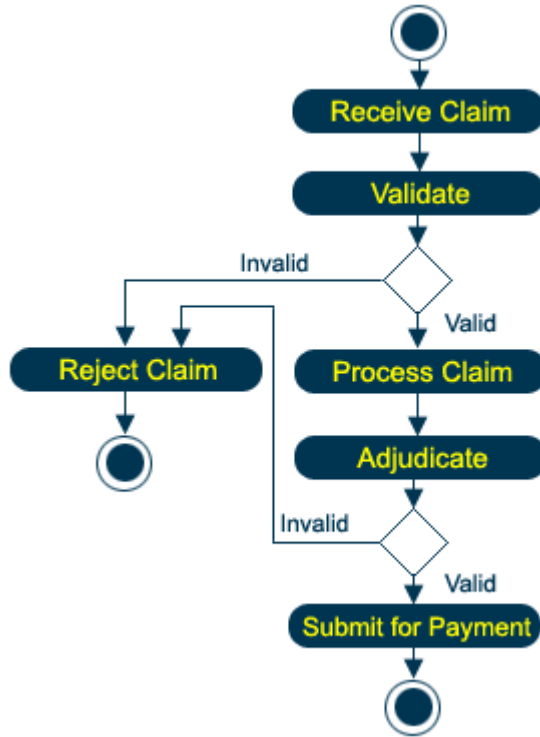
A business process is the sequences of activities that an enterprise must perform in order to respond appropriately to an event. In the case of HIPAA, a business process is the series of steps that an organization must carry out in response to an inbound HIPAA transaction. These steps include processing by back-end applications and interactions with company personnel who execute manual processes. The business process is what ties all the steps together and documents the breadth of activity.

BizTalk Accelerator for HIPAA comes with template business processes that show the flow through an organization of HIPAA transactions.

For example, a claim request might typically be routed to a claims back-end legacy system, an accounting back-end system, an adjudication back-end system as well as being reviewed by employees if it has extenuating circumstances. BizTalk Accelerator for HIPAA comes packaged with a typical business process for the processing of a claim that includes these steps. The organization will tailor these steps so that the business process maps exactly to the way the particular organization responds to a claim request. Also included with the product is consulting services that examine the back-end systems that are involved and hook BizTalk up with these systems.

BPM user interface

The user interface of the BPM tool allows a user to graphically illustrate a business process. The output of this tool is called an Orchestration. Figure 1 is an example of an Orchestration for a 'claim processing' business process.



This example, albeit overly simplified, shows how a business process can be represented in a graphical manner so that a business analyst can see the route that a received claim will take in the organization. Of course each of the activities (represented by the rounded rectangles) is a high-level view of a part of the process.

Graphically depicting the business process is valuable; the real value of BizTalk however is its capability to use the diagram as a provider of the rules that guide BizTalk through the processing of the claim request. That is where the BPM engine comes in.

BPM engine

When the business analyst is happy with the Orchestration, he or she 'saves' it using BizTalk. It is saved in a format called XLANG. When it is saved, this XLANG document is associated with a specific type of inbound HIPAA transaction.

The BPM engine is always running. When it receives a transaction, it searches through its XLANG documents to locate one that is associated with the transaction. When it finds one, it guides the transaction through the steps of the XLANG document, essentially tracing through the Orchestration.

The BPM engine is tuned so that it can remain responsive no matter how large the volume of transactions gets. It can also be more finely tuned to meet the specific organization's needs if there are special requirements.

Messaging Service

The messaging service that is part of BizTalk provides the facility to receive transactions (a.k.a. messages) as well as to route them to back-end systems and

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to business partners.

The messaging service provides queuing. This means that all messages are queued when they are received by BizTalk and they are routed through the different areas of BizTalk by sending them to the queues that front-end these areas. Because BizTalk queues the messages like this, a transaction does not need to complete immediately if BizTalk is busy; it can be completed in steps. This is one way that BizTalk remains responsive in an organization that is responsible for large volumes of transactions. It also allows BizTalk to provide tracking information about a message from the time it enters the organization until its processing is complete.

The messaging service is responsible for providing a 'document-processing pipeline'. This pipeline takes a message through several stages before it is passed on to a back-end system. These stages prepare the message into a form that the back-end system can understand. The pipeline performs tasks such as decrypting a message that was encrypted by a business partner and validating that the messages are valid transactions. In the case of HIPAA, the validation would ensure that the message contains a valid HIPAA transaction.

In summary

This article provided a high-level view of BizTalk and its add-on product BizTalk Accelerator for HIPAA. Hopefully the article whetted your appetite so that you want to know more about it. Other articles in this series will explore the product in more detail.